the molecular weights are in terms of a number average molecular weight. Applicants provide for the Examiner's consideration a publication by Olin Corporation of April 1998 entitled "Terms and Formulas Used in Urethane Polymer Preparations". The Examiner has stated in the present Office Action that the article was not received, Applicants apologize for this and submit a second copy of the article. The article establishes that those of ordinary skill in the field of polyurethanes would understand that a reference to "molecular weight" of a polyol is to a number average molecular weight.

Specifically, the article acknowledges that the "[w]eight average molecular weight is seldom used in polyurethane calculations..." (our numbered pages 1-2). Furthermore, when speaking of hydroxyl numbers as set forth in Applicant's specification at page 4, it is well known to those of ordinary skill in the art that the molecular weight can be calculated using the hydroxyl number of the polyol and that this molecular weight is the number average molecular weight. At our numbered page 1 in the article, the author states the following:

> Mn[number average molecular weight] is most useful in polyurethane Calculations since it is inversely proportional to the...hydroxy number (OH). For a definition of MN in terms of...OH numbers, see [18].

Formula 18 is set forth on page four of the article as shown below:

$$\frac{1000(56.1)f}{OH} = Mn$$

Applicants submit that this publication is objective evidence to those of ordinary skill in the art prior to the filing date of this application that the correlation between the hydroxyl number and the molecular weight was known and that the correlation is with a number average molecular weight. Applicants' application is directed to the field of polyurethanes

where it is commonly understood that the molecular weight of the polyol is the number average molecular weight. Thus, support exists in the specification for explicitly identifying the molecular weight as a number average molecular weight. Therefore, withdrawal of the rejection is requested since the claims now recite a number average molecular weight.

The Examiner also stated in the present Office Action that "applicants have failed to address the issue of component b14) not being mutually exclusive from components b11, b12), 0r b13)."

Claim 1 has been amended to recite that the chain extender, first, second, and third polyether polyalcohol are mutually exclusive of and structurally distinct from each other. In addition, the polyalcohol b11) differs from the polyalcohol b12) based on its initiator. Thus, these rejections are believed to be overcome.

The Examiner had rejected Claims 1 and 2 under 35 USC § 102(b) as being anticipated by *Schwindt, et al. (`423)* or *Grogler (`497)*. The Examiner alleged:

> Patentees disclose polyurethane casting compositions suitable for producing molded elastomeric coverings, comprising the reaction product of a polyisocyanate and a propylene oxide derived polyether polyol, wherein the polyol is present in an amount which meets Applicants' claims. See abstract; column 4, lines 3-21, 67, and 68; column 5, lines 1-12; and column 7, lines 51-63, within Schwindt et al. See abstract; column 11, lines 3-22; and example 3, within Grogler et al."

A rejection of a claim under 35 USC § 102(b) as being anticipated by a cited reference requires that each and every limitation of the rejected claim be found within a single cited reference. If even a single limitation is not found within the cited reference then a rejection of this claim based on the cited reference is improper and must be withdrawn.

Amended Claim 1 includes numerous limitations not found in either *Schwindt, et al.* or *Grogler, et al.* Amended Claim 1 is directed toward a veneer made from a reaction mixture comprising an isocyanate and a mixture of isocyanate reaction compounds. The mixture (b1) comprises:

> "b11) from 15 to 90 percent by weight, based on the weight of the mixture (b1), of a first polyether polyalcohol, said first polyether polyalcohol comprising a hydroxyl functional initiator and propylene oxide, having a number average molecular weight of from 400 to 6,000 and a mean functionality of from 1.5 to 3;
>
> b12) from a positive amount to 20 percent by weight, based on the weight of the mixture (b1), of a second polyether polyalcohol, said second polyether polyalcohol comprising an amine functional initiator and propylene oxide, having a number average molecular weight of from 400 to 6,000 and a mean functionality of from 1.5 to 3;
>
> b13) from 0 to 35 percent by weight, based on the weight of the mixture (b1), of a third polyether polyalcohol having a number average molecular weight of from 150 to 7,000 and a mean functionality of from 2.1 to 5;
>
> b14) from a positive amount to 30 percent by weight, based on the weight of the mixture (b1), of a bifunctional chain extender; ...
>
> wherein said chain extender, said first, said second and said third polyether polyalcohols are mutually exclusive of and structurally distinct from each other."

Such a reaction mixture is not disclosed in either of the cited references.

The *Schwindt, et al.* reference discloses a process for the production of a light fast, transparent polyurethane elastomer comprising reacting from 90 to 50 percent by weight of a compound having a molecular weight of from 400 to 10,000 which has at least two isocyanate reactive hydrogen atoms with from 50 to 10 percent by weight of an aliphatic and/or alicyclic polyisocyanate and from 0 to 20 percent by weight of a chain-lengthening agent having a molecular weight of from 60 to 400. *Schwindt, et al.* is specifically directed toward an improvement utilizing a unique catalyst combination of an alkali metal hydroxide and/or

alkaline earth metal hydroxide with an organometallic compound selected from the group consisting of the acetyl acetonate of iron, C_1-C_8 alcoholates, phenolates, enolates and/or acetyl acetonates of metals of the 4th main group or sulfur-containing compounds of metals of the 4th main group, in which compounds the sulfur is directly attached to the metal atom. There is no disclosure in *Schwindt, et al.* of the very specific mixture of isocyanate-reactive compounds required by amended Claim 1. Specifically, *Schwindt, et al.* does not disclose a reaction mixture having specific amounts of a first polyether polyalcohol that is hydroxyl initiated in combination with a second polyether polyalcohol that is amine functional initiated, both of which are combined with a bifunctional chain extender. Thus, because amended Claim 1 includes several limitations neither found in nor made obvious by *Schwindt, et al.* the rejection of this claim, and the claims which depend therefrom under 35 USC § 102(b) based on *Schwindt, et al.* is improper and should be withdrawn.

Grogler, et al. is directed toward a heat-curable polyether-polyester-polyurethane urea. *Grogler, et al.* discloses formation of this polyurethane by combining solid polyisocyanates with "OH- and/or NH_2-terminated polyoxyalkylene polyethers that have molecular weights of 400 to 10,000 and are liquid at room temperature" with "solid OH- and/or NH_2-terminated polyesters that have molecular weights of 400 to 20,000 and are solid at room temperature, and which are thoroughly distributed throughout the mixture but are not homogeneously miscible within the polyether". Amended Claim 1 requires that the first, second, and third polyalcohols all be polyether polyols unlike *Grogler, et al.* which is a mixture of polyethers and polyester polyols. Furthermore, there is no disclosure in *Grogler, et al.* of combining specific amounts of a hydroxyl functional initiated polyether polyol with an amine functional initiated polyether

polyol and a bifunctional chain extender to produce an elastomer as required by amended Claim 1. There is no disclosure in *Grogler, et al.* of such a specific combination. Thus, because amended Claim 1 includes numerous limitations neither found in nor made obvious by *Grogler, et al.* the rejection of this claim, and the claims which depend therefrom under 35 USC § 102(b) based on *Grogler, et al.*, is improper and should be withdrawn.

Applicant's attorney respectfully submits that the claims as amended are now in condition for allowance and respectfully requests such allowance.

Respectfully submitted,

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May 23, 2001
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CERTIFICATE OF MAILING

I hereby certify that this paper or fee is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Box Non-Fee Amendment, Assistant Commissioner of Patents, Washington, D.C. 20231, on **May 23, 2001**.

Irene M. Brown

MARKED-UP VERSION

1. (Thrice amended) A veneer made from a reaction mixture comprising:

a) an isocyanate,

b) a mixture (b1) of isocyanate-reactive compounds comprising:

b11) from 15 to 90% by weight, based on the weight of the mixture (b1), of a first polyether polyalcohol, said first polyether polyalcohol comprising a hydroxyl functional initiator and propylene oxide, having a number average molecular weight of from 400 to 6000 and a mean functionality of from 1.5 to 3;

b12) from a positive amount to 20% by weight, based on the weight of the mixture (b1), of a second polyether polyalcohol, said second polyether polyalcohol comprising an amine functional initiator and propylene oxide, having a number average molecular weight of from 400 to 6000 and a mean functionality of from 1.5 to 3;

b13) from 0 to 35% by weight, based on the weight of the mixture (b1), of a third polyether polyalcohol having a number average molecular weight of from 150 to 7000 and a mean functionality of from 2.1 to 5;

b14) from a positive amount to 30% by weight, based on the weight of the mixture (b1), of a bifunctional chain extender; and, optionally,

c) catalysts and/or;

d) auxiliaries and/or additives;

wherein said chain extender, said first, said second and said third polyether polyalcohols are mutually exclusive of and structurally distinct from each other.